

Wei-Lin Chiang

江韋霖

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Education

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| M.S. in Computer Science Dept., National Taiwan University | <i>Feb. 2018 - present</i> |
| <ul style="list-style-type: none">• Advisor: Prof. Chih-Jen Lin, GPA: 4.26/4.30 | |
| B.S. in Computer Science Dept., National Taiwan University | <i>Sep. 2013 - Jan. 2018</i> |
| <ul style="list-style-type: none">• Minor in Mathematics• GPA: 4.06/4.30, with 4 presidential awards (top 5% award) | |

Research Interests

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- Optimization for machine learning, scalable machine learning algorithms, data mining
 - Machine learning software and its system design

Publications

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- **W.-L. Chiang**, X. Liu, S. Si, Y. Li, S. Bengio, and C.-J. Hsieh. “Cluster-GCN: An Efficient Algorithm for Training Deep and Large Graph Convolutional Networks,” **ACM KDD 2019**
 - C.-Y. Hsia, **W.-L. Chiang**, and C.-J. Lin. “Preconditioned Conjugate Gradient Methods in Truncated Newton Frameworks for Large-scale Linear Classification,” **ACML 2018 (Best paper award)**
 - **W.-L. Chiang**, Y.-S. Li, C.-p. Lee, and C.-J. Lin. “Limited-memory Common-directions Method for Distributed L1-regularized Linear Classification,” **SIAM SDM 2018**
 - **W.-L. Chiang**, M.-C. Lee, and C.-J. Lin. “Parallel Dual Coordinate Descent Method for Large-scale Linear Classification in Multi-core Environments,” **ACM KDD 2016**
 - M.-C. Lee, **W.-L. Chiang**, and C.-J. Lin. “Fast Matrix-vector Multiplications for Large-scale Logistic Regression on Shared-memory Systems,” **IEEE ICDM 2015**

Work Experience

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| Intern@Google Research , Mountain View | <i>Dec 2018 - Mar 2019</i> |
| <ul style="list-style-type: none">• Developing efficient algorithms for training large (million-scale) and deep GCN models• Achieved state-of-the-art performance on several public datasets (PPI, reddit)• Mentors: Prof. Cho-Jui Hsieh and Si Si | |
| Intern@Alibaba Group , Hangzhou | <i>July 2017 - Sept 2017</i> |
| <ul style="list-style-type: none">• Developing distributed ML algorithms on Alibaba’s parameter server (KunPeng)• Reduced the training time (5% ~ 30%) of billion-scale models behind Ads and recommendation systems• Mentors: Prof. Chih-Jen Lin and Wei Chu | |
| Intern@Microsoft Research Asia , Beijing | <i>December 2016 - February 2017</i> |
| <ul style="list-style-type: none">• Investigating distributed training methods on deep learning frameworks• Mentors: Qiwei Ye | |
| Research Intern@Microsoft , Redmond | <i>July 2016 - October 2016</i> |
| <ul style="list-style-type: none">• Developing large-scale ML algorithms on Microsoft’s distributed platform (REEF)• Implemented Newton’s method for solving billion-scale Ads CTR problems• Mentors: Prof. Chih-Jen Lin and Sathya Keerthi | |

Awards and Honors

- Best Paper Award, ACML 2018
- Bachelor Thesis Award, First Prize, National Taiwan University 2017
- Innovative Undergraduate Research Award, Ministry of Science and Technology 2017
- Undergraduate Research Award, First Prize, NTU CSIE 2016
- Student Travel Award, KDD 2016, 2019
- Student Travel Award, SDM 2018

Open-source Research Projects

Cluster-GCN *Spring 2019 - present*

- Major developer of an efficient algorithm for training large and deep GCN
- Link: https://github.com/google-research/google-research/tree/master/cluster_gcn

Distributed LIBLINEAR *Summer 2017 - present*

- One of the major developers of a distributed extension of a widely-used linear classification package
- The study is based on L1 regularized linear classification which published at SDM 2018
- Link: <https://www.csie.ntu.edu.tw/~cjlin/libsvmtools/distributed-liblinear/>

Multi-core LIBLINEAR *Spring 2015 - present*

- One of the major developers of a multi-core extension of a widely-used linear classification package
- The study on primal solvers is published at ICDM 2015; the one on dual solvers is published at KDD 2016
- Link: <https://www.csie.ntu.edu.tw/~cjlin/libsvmtools/multicore-liblinear/>

Teaching Experience

Lecturer & Organizer@Project Sprout, National Taiwan University *Spring 2014 - Spring 2017*

- Offering C++/Python programming courses for senior high students in Taiwan
- Influenced over 700 students and was sponsored by Microsoft, Trend Micro, CyberLink and SYSTEX
- Facebook page: <https://www.facebook.com/ntucsiesprout>

Teaching Assistant, National Taiwan University *Fall 2015*

- *Introduction to the Theory of Computation* instructed by Prof. Chih-Jen Lin